SBR No.000011/17-18
DATED 28-11-17

EE/ELE/Y/BR.No.000011/17-18
Dt.28/11/17

No.1 St & Final bill

Original/Duplicate/Triplicate

CONTRACT CERTIFICATE

(For Other Works)

Date.....2017

Division: **Electricals (Yelahanka)** Sub-Division: **Electricals**

Bill Received No. Dated Divisional Cash Book Voucher No..... Dated.....
Sub Divisional **Job Code :-007-17-000037**
Schedule Docket No. Head of Account :**P 0486**
D.R.No. :

Name of Work : upgradation and Improvements to hebbala Electrical Crematorium Furnace -2 in Ward no. 7 Yelahanka Zone. "

Name of Contractor and Full Address: Technical Manager KRIDL .
Reference to Agreement No:EE/Ele/YZ/WO/16 /17-18 Date:20/05/2017

Certified that the measurements were taken by me on 28/8/17 and recorded of Pages ~~311H/17-18~~ 311385 to 397 of measurement Book No. 311H/17-18 and that the work is satisfactorily executed.

Contractor

Assistant Executive Engineer
Byatarayanapura Sub-division
KRIDL BBMP, Bangalore

Officer-in-charge of work

Certified that the measurement were taken by me on 28/8/17 and found correct. The work is satisfactorily executed.

Certified that the quantities of materials shown in column 3 of Account have been actually brought to site of the work and the contractor has not previously received any advance on this security. These materials are of and imperishable nature and are all required for immediate use on the work in connection with items for finished work have been agreed upon. A normal agreement signed and executed by the contractor is recorded in the office.

Sub-Division Officer

Assistant Executive Engineer (Ele)
BBMP, Bangalore

II Memorandum of Payment

1) Total value of work done or supplies made as per account within	Bill = 4396229=00	
2) Deduct amount to be held in reserve being .....percent Rs.....	IT 2.1.	87925=00
3) " Balance	GST 1%	43962=00
4) Deduct Payment:	CGST 1%	43962=00
a) Amount of previous payment as in the Office Cash Book Voucher No.....Dated.....S.D. No..... adjusted towards cash advance recovery of	Amount LWC 1%	43962=00
	CBFD 1%	4396=00
	FSD 7.50%	329717=00
b) Payments Now made } cost store or other material supplied. recovery of amount creditable to this/other work Amount paid on this bill Cheque / Cash.	deductions =	553924=00
5) Balance being unpaid value of work done held in reserve.	Cheque	3842305=00
6) Deduct cash advance made on the Office cash Book Voucher No..... dated.....less adjustments.		
7) Net amount due to or from Contractor unadjustments items.		
8) Advance to Contractor for materials brought to site (as detailed) within.		
9) Value of Government materials supplied.		
Total amount adjusted -		

Received Rs..... (in words).....
.....
by cash and by adjustment of Payment as per memorandum
(in final settlement of all demands)

Contractor's Signature

Assistant Executive Engineer
Byatarayanapura Sub-division
KRIDL BBMP, Bangalore

(For use in the Office)

Witness
1.
2.

Dated Signature of Contractor
Paid by me by Cheque No. Dated.....
Cash Rs..... Dated.....
Initials of Officer making payment

Stamp

ಲೆಕ್ಕಶೀರ್ಷಿಕೆ P0486 M2R to Burial grounds
ರೂ: 43,96,229=00 ಮೊತ್ತ ಸ್ವೀಕರಿಸಿದೆ
ರೂ: 38,42,305=00 ನೀಡಲಾಯಿತು
ರೂ: 5,53,924=00

Executive Engineer

ಲೆಕ್ಕ ಅಧೀಕ್ಷಕರು

ಕಾ.ಪಾ.ಇ.(ಬಿ) ಯಲಹಂಕ ವಲಯ

Sl no	Description of item	Unit
	Name of Work :upgradation and Improvements to hebbala Electrical Crematorium Furnace -2 in Ward no. 7 Yelahanka Zone.	
1	Supplaying & Fixing of Coil holding bricks Vertical System 115X115X300 mm	Nos
2	Supplaying & Fixing of Insulation bricks std 75X115X225mm	Nos
3	Supplaying & Fixing of Refractor STD IS 6 75X115X225mm	Nos
4	Supplaying & Fixing of Refractor STD IS 8 75X115X225mm	Nos
5	Supplaying & Fixing of Refractor side arch bricks 230X115X75/65mm	Nos
6	Supplaying & Fixing of Refractoy slabs MCL 150X300X600mm	Nos
7	Supplaying & Fixing of Refractoy slabs MCL 150X300X450mm	Nos
8	Supplaying & Fixing of Body laying with MCL 150X300X600mm	Nos
9	Supplaying &.Fixing of Refractor cement Fine ACC 50(50 kg bag)	Bags
10	Supplaying & Fixing of Refractor cement FIR crate super (50 kg bag)	Bags
11	Supplaying & Fixing of Refractoy cement white heat K Acc make	Bags
12	Supplaying & Fixing of Acoustic set liquid bind	drum
13	Supplaying & Fixing of FIBT blank kit 96 grade	Box
14	Supplaying & Fixing of FIBT blank kit 128 grade	Box
15	Supplaying & Fixing of SS Stud 304X250X10m	Nos
16	Supplaying & Fixing of FIR clay cement	Bags
17	Supplaying & Fixing of Refractoy slabs IS8 100X300X600mm	Nos
18	Supplaying & Fixing of Refractoy slabs IS8 100X300X450mm	Nos
19	Supplaying & Fixing of 3.5 KW Heating coils Made out of 5.8mm Thick 80/20 Grade nickel chromium wire, Heating Zone should be 950mm length, End terminal rod ss 304Grade 10mm dia 550mm Lenth suitable for Verticle mounting system in Electrical Furnace including Porcelin beeds spacers Supporting system Complet	Nos
20	Labour charges for Removing and relining works	job
21	Supplaying & Fixing of Coil connecting to used to coper flat 25X4 mm	kgs
22	Supplaying & Fixing of Epoxy insulators (bus bar mounting)	Nos
23	1) Furnace top fabrication works with MS angle and channel with covering sheets	job
24	2) Furnace main door work front sheet repalcement 5 mm thickness, guiding wheel (4 Nos) with shaft including bearing repalcement and mechanism servicing	Set
25	2) Furnace back door Ash removing doors Newly fabricated.	
26	3) Body charging trolley servicing and repair works	job

Previous		Present Measurement			Total Upto Date		Remarks
Qty.	Cost	Qty.	Rate	Amount	Qty	Cost	
		90	2200.00	198000.00	90	198000.00	
		2500	84.00	210000.00	2500	210000.00	
		1350	86.00	116100.00	1350	116100.00	
		1350	102.00	137700.00	1350	137700.00	
		200	104.00	20800.00	200	20800.00	
		35	6200.00	217000.00	35	217000.00	
		30	5600.00	168000.00	30	168000.00	
		8	11600.00	92800.00	8	92800.00	
		17	3200.00	54400.00	17	54400.00	
		14	5200.00	72800.00	14	72800.00	
		4	6200.00	24800.00	4	24800.00	
		1	6800.00	6800.00	1	6800.00	
		13	4600.00	59800.00	13	59800.00	
		2	6200.00	12400.00	2	12400.00	
		50	280.00	14000.00	50	14000.00	
		12	1200.00	14400.00	12	14400.00	
		8	3800.00	30400.00	8	30400.00	
		17	2800.00	47600.00	17	47600.00	
		18	37000.00	666000.00	18	666000.00	
		1	80000.00	80000.00	1	80000.00	
		40	1500.00	60000.00	40	60000.00	
		30	80.00	2400.00	30	2400.00	
		1	120000.00	120000.00	1	120000.00	
		1	66000.00	66000.00	1	66000.00	
		1	70000.00	70000.00	1	70000.00	
		1	20000.00	20000.00	1	20000.00	

27	fabrication, Supplay ,erection & commissioning of Exhaust Blower. Following specifications, 7.5 Hp,1440 RpM 3Phase Induction Motor (ABB make) Centrifugal belt driven 50mm SS310 Shaft heavy duty 2Nos ball bearing, Motor & Blower Mounting frame 75x50 mm C Chanel, Implers & Outer body 310SS 5 mm Thick With Matching Flanges Air in let & out let Opening300mm.	
28	Supplay & Erection of 1/2 Hp 3Phase 50 cycles 1440 RPM Flange Mounting Motor with Gear Out put 10 RPM	Se
29	Scrubber work- SS fabricated 304 sheet 3x3x3 feet 3mm thickness, water tank, using 40x40x5 mm iron L angle -30 mtrs SS flat:40x5 : 25 mtrs ; SS pipe 2: 6 mtrs; Gate valve 2;4 Nos; Elbow 2" : 8 Nos; 2" flange: 8 Nos; ¾" pipe: 12mtrs; ¾" flange: 8 Nos; ¾" Bend : 8 Nos Reducer ¾" 4 Nos Water pump 3 phase 1 HP 1 ½" x 1 ½": 2 Nos. (Momoblock pump), including of labour, diamantling erection and commission of all the above work.	Set
30	SS Fabrication 2 mm thick, 500 mm dia with flange. (blower to Chimney connecting pipe)	Mtrs
31	SS Fabrication 2 mm thick, 250 mm dia with flange. (blower to Chimney exhausting pipe)	Mtrs
32	SS fabrication 2 mm thick, 300 mm dia with flange. (by-pass lining work)	Mtrs
33	Supply and fixing of 4pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers and wiring etc., complete with AC-3 Rating and as per IS-13947.225-250Amps	Nos
34	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics) Four POLE.320-250Amps 35kA.	Nos
35	Supplying of Switch disconnector fuse unit (TPN) HRC type (but without HRC fuses). With AC-23A duty and as per IS-13947.200Amps	Nos
36	Supplying and fixing HRC fuse link on existing switch fuse base with watt loss as per IS-13703.200Amps	Nos
37	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898.40-63 Amps SP	Nos
38	40-63Amps TPN	Nos
39	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power factor, KVA, KWH,KVAR suitable for 3 phase, 4 wire LT network with IP 54 degree of protection and completely wired as required with communication Port and Class 0.5s accuracy.	Nos
40	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C.	Nos
41	Supplying, fixing and wiring 3 Phase Digital Ammeter /Voltmeter.	Nos
42	Supplying, fixing and wiring 1000/5A to 1600/5A 15VA Burden class 1 Current Transformer.	Nos
43	Supplying, fixing and wiring rotary selector switch suitable for Ammeter.	Nos
44	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter.	Nos
45	Supplying and fixing HRC fuse units base on existing switch/panel board.up to 32Amps	Nos
46	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP -A.1.5 sqmm	Mtrs
47	2.5 sqmm	Mtrs
48	16 sqmm	Mtrs
49	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic/FRP/DMC insulator which are mounted on powder coated 40x6mm M.S.flat frame work in existing panel board. The bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete.100Amps 4x30x6mm Aluminum Strips	Mtrs
50	Fixing of ..... Amps TPST / change over switch / Contactor along with neutral link with screws, bolts, nuts and wiring using required capacity wires and circuit labeling.100A to 250A TPST	Nos

		1	472312.00	472312.00	1	472312.00	
		1	49500.00	49500.00	1	49500.00	
		1	195000.00	195000.00	1	195000.00	
		5	29500.00	147500.00	5	147500.00	
		4	15600.00	62400.00	4	62400.00	
		6	21250.00	127500.00	6	127500.00	
		6	17801.00	106806.00	6	106806.00	
		6	16327.00	97962.00	6	97962.00	
		4	6262.00	25048.00	4	25048.00	
		12	552.00	6624.00	12	6624.00	
		6	677.00	4062.00	6	4062.00	
		4	1936.00	7744.00	4	7744.00	
		2	8003.00	16006.00	2	16006.00	
		3	442.00	1326.00	3	1326.00	
		6	1224.00	7344.00	6	7344.00	
		3	720.00	2160.00	3	2160.00	
		2	172.00	344.00	2	344.00	
		2	140.00	280.00	2	280.00	
		9	174.00	1566.00	9	1566.00	
		381	18.60	7086.60	381	7086.60	
		485	29.20	14162.00	485	14162.00	
		40	171.00	6840.00	40	6840.00	
		3	2135.00	6405.00	3	6405.00	
		2	387.00	774.00	2	774.00	

51	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A.3.5 core 25 sqmm	
52	3.5 core 50 sqmm	M
53	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.On wall /Structure.25 sqmm to 75 sqmm	
54	LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools.	
	LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacture. Suitable for B1/B2 Roads as per IS 1944 Part I & Part II.LED Streetlight 65watts	Nos
	Total Rs	
	KRIDL Charges Rs 9.1%	
	Total Rs	

Certificate =

Certify that the work has been conducted satisfactorily.

T.M. Baddy
JE(E)

Assistant Executive Engineer (Ele)
BBMP, Bangalore

		92		15226	92	15226		
		192	165.50	31776.00	192	31776.00		
		194	265.00	51410.00	194	51410.00		
		186		24910	186	24910		
		196	16.20	3175.20	196	3175.20		
				3013.20		3013.20		
		2	18720.00	37440.00	2	37440.00		
				4072752.80		**4072752.80**		
				370620.5048		**370620.5048**		
				4443373.30		**4443373.30**		

Total ₹ 4029540-80 4029540-80

Add GST 9-1% ₹ 366688-21 366688-21

Total ₹ 4396229-01 4396229-01